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Morton Jay Asch

Nondirective Teaching in Psychology:  
An Experimental Study

By  
Morton Jay Asch

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1951

# Psychological Monographs:

## General and Applied

Combining the *Applied Psychology Monographs* and the *Archives of Psychology*  
with the *Psychological Monographs*

HERBERT S. CONRAD, *Editor*

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## Nondirective Teaching in Psychology: An Experimental Study

By

MORTON JAY ASCH

*Utica College of Syracuse University  
Utica, New York*

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## CHAPTER I

### THE EXPERIMENT

#### A. STATEMENT OF THE PROBLEM

THE AIM of this study is to evaluate the over-all effectiveness of nondirective teaching of an undergraduate course in general psychology. It is the specific intention of the experiment to investigate the value of the nondirective method in effecting changes in students' intellectual, social, and emotional adjustment.

#### B. GENERAL PROCEDURES

*Subjects.* The subjects in this experiment were students at Mohawk College enrolled during the spring semester of 1948. They were all male veterans of World War II, whose average age was twenty-one. All of the subjects had successfully completed the first semester of a year course in general psychology and had registered for the second semester of the course.

*Experimenter.* The experiment was designed and conducted by the writer. At the time of the study, he was an instructor of psychology for the Associated Colleges of Upper New York. He had previously received training in nondirective counseling techniques and had himself participated as a member of a non-

directively structured course at Syracuse University.

*The experimental group.* Four sections of the second semester of the year course in general psychology were included in the study. All of these classes were taught by the writer. The section consisting of the smallest number of students, 23, was selected as the experimental group. The only discriminating factors considered at the time of registration were that no one entering the nondirective section had ever taken a course that had been conducted in a similar fashion, and that a proportionately equal number of students in all sections had taken the first semester course in psychology with each of the instructors in the department. The experimental section was limited as to size in order that it might offer the greatest possibilities for intensive investigation.

The plan was to conduct the experimental class on a strictly student-centered basis. The counseling techniques successfully used in the *individual situation*, as described by Rogers (45), Combs (11), and Snyder (59), would be applied in a *classroom group situation*. Descriptions of the manner in which this has been accomplished in other classes have been given by Landsman (24) and Schwebel and Asch (52).<sup>2</sup>

Specifically, the class involved in the present experiment was conducted in the following way. During the first meeting

<sup>1</sup> The author owes a sincere debt to the many friends and associates who assisted in the development of this study by their suggestions and criticisms.

He wishes to make specific acknowledgement of the aid and encouragement of Professor William Cruickshank, under whose friendly guidance this thesis was written.

He also wishes to express deep appreciation of the kind interest shown by Professor Arthur W. Combs.

Finally, acknowledgement must be made of the cooperation of the 124 students of General Psychology 22, which met in the spring of 1948, who served as the subjects and the inspiration for this study.

<sup>2</sup> An excellent study on nondirective teaching by Volney Faw has been published since this manuscript was written. The reference is: A Psychotherapeutic Method of Teaching Psychology. *Amer. Psychologist*, 1949, 4, pp. 104-109. The article gives a very complete picture of the social relationships within the student-centered classroom.

the method was described, the requirements were outlined, and the limitations set. The students were told that they were expected to read chapters 13 through 29 of the textbook (34) and several chapters assigned in a supplementary text (14). No other definite reading assignments were given, although suggestions were frequently made during the course of the semester concerning references which might clarify or elaborate upon some topic of discussion. A list of books pertinent to the subject matter of general psychology was distributed to the experimental as well as control groups. The experimental subjects were also told that they were required to write one reaction report every week based on any readings, any experience or discussion. It was explained that this report could be as long or as short as the student desired. It was, however, to be restricted to reactions. The student was encouraged to be as free as possible in these reports in expressing his feelings about anything he wanted to write about, whether or not it had anything to do with the course.

The students of the experimental class were told further that they could discuss any subject they wished during the class, and that the instructor would provide no information "involving an expression of his own opinion," would raise no questions, but would clarify, summarize, or objectify student remarks. The instructor would sit with the students in chairs arranged in a circle. The class was told that it could do anything it wished in regard to the discussions. It could plan the methods or order of discussion or it need not do so.<sup>3</sup> The instructor, acting

as group nondirective counselor, would not tell the group what he thought or what they ought to do.

Finally, they were told that there would be no quizzes, and that the student would indicate the final grade he believed he had earned and would defend it in conference with the instructor.

*The Control Group.* The Control Group consisted of 101 students enrolled in the 3 other sections of the second semester of the year course in general psychology. These students were required to follow the schedule sheet of readings, homework assignments, and testing periods outlined for them. The classes were conducted in the traditional manner the writer believes to be typical for most college social science courses. Somewhat more than half of the period was devoted to lecture and demonstration by the instructor; the rest of the time was spent in instructor-directed discussions. A mid-term and final examination and two short quizzes were given during the course of the term. A term paper was required. Three homework assignments other than those mentioned above were also required.

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suggested that the nondirective method made self-regulation one of its implicit consequences. Students D and E were in favor of unlimited spontaneous discussions. No definite group decision was arrived at. Student B introduced the discussion of the second class meeting by referring to a point in the text that he wanted to have clarified. From this point on throughout the course of the semester, without any explicit group decision, the textbook seemed to serve as the framework for most of the discussions. The tangents, of course, were many and varied. Topics investigated included drug addiction, sex pathology, modern art, religious intolerance, personality tests, juvenile delinquency, etc. A field trip was made to Utica State Hospital when the area of insanity was explored. Another trip was taken by part of the class whose interest in modern art led them to study paintings at the Munson-Williams-Proctor Art Institute. One student brought in several of his own sketchings to class to be used as a group projective technique.

<sup>3</sup> It is interesting to note what actually did happen in this respect. During the remainder of the first hour, the group discussed the problem of planning. Students A, B, and C stressed the need for some form of regulation. Student D



It will be necessary throughout this paper to distinguish between the three directive sections as a whole and the specific groups within these sections which are used as control groups for different problems studied. Therefore, the term *Control Group*, capitalized, will refer to the three directive sections as a whole. The term *control group No. 1* or *No. 2*, in lower case letters, will refer to the specific group of subjects used in the study of a particular problem. (Thus, control group No. 1 was used in the study of knowledge of subject matter and includes subjects with similar scores on scholastic aptitude tests and similar point-grade averages. The subjects involved in the study of social attitudes and emotional adjustment formed control group No. 2. Both of these control groups had been selected from the larger Control Group.)

### C. DESIGN OF THE EXPERIMENT

The following section will describe the methodological considerations and specific measurements involved in testing the hypothesis of the experiment. It will discuss the different evaluation techniques employed and the reasons for their use in this study.

#### 1. Knowledge of Subject Matter

*Methodological considerations.* Several investigators have felt that the non-directive psychotherapeutic processes and the learning process are fundamentally related (60, Chs. 10-11), (24, pp. 114-115). Whether nondirective teaching is conducive to the learning of specific subject matter, however, is a problem that has been experimentally neglected. What is being tested by the present phase of the experiment is the effectiveness of nondirective teaching in

enabling students to master the factual subject matter of a course.

The first important consideration in studying the problem of gains in factual information was to obtain a group from the Control Group of the three directive sections that would closely compare with our nondirective section. In this part of the experiment, the most meaningful control would be in the area of scholastic ability and previous academic achievement in college.

All but a few of the students attending Mohawk College had taken the Ohio State Scholastic Aptitude Test upon entrance. Those who had not were given the American Council on Education scholastic aptitude test. The latter test was used also as a check on students previously tested by the Ohio State whose scores were abnormally low. These test scores were obtained for all the subjects involved in the experiment.

With the cooperation of the registrar, it was also possible to secure the grade-point average of every student involved in the experiment till the beginning of the spring semester. The experimenter thus had two of the best measurements available for purposes of equating subjects in relation to the study of this problem. It is interesting to note that most studies indicate that there is a correlation of about .60 between scores on group intelligence and group scholastic aptitude tests and college marks (34). David Komisar, director of the college Guidance Center, made a study on students at Mohawk College, bearing out the point for the subjects involved in this experiment.

Every individual registered in the experimental section was equated with a student from the Control Group of 101. It was possible to select 23 members

from that latter group who had closely equivalent scholastic aptitudes and abilities to those of the subjects in the experimental class.

*Measurements used.* The members of the nondirective group were told at the beginning of the term that they would give themselves their own grade. They were informed that their grade would not be based on any examination results. They were given no tests on the subject matter of the course throughout the term. But one week before the close of the semester, the class was informed that it would be required to take the regular final examination for General Psychology 22 during exam week. They would do this after having graded themselves and they were assured that no grade would be changed as a result of their exam mark. Questions pertaining to whether they should study specifically for the examination were answered to the effect that they should do as they desired about this. The details of the experimental situation were outlined at this time, although most of the students already knew that they were being used as "guinea pigs" throughout the term.

The final examination was given to control group No. 1 and to the experimental group under equal testing conditions. The examination consisted of two parts. The first part was an objective test of 123 items dealing with the factual material of general psychology. There were 63 true-false items and 60 multiple-choice questions. The second part of the examination was somewhat more subjective. It involved the definition through illustration of 4 out of 6 basic psychological concepts: maturation, level of aspiration, re-conditioning, homeostasis, internal determiners of attention, and levels of intelligence.

## 2. Social Attitudes

*Methodological considerations.* In this phase of the study, the writer attempted to experimentally investigate a hypothesis which was induced through personal observations of previous nondirective group situations. The belief was that a permissive accepting atmosphere, where individuals of different religious, racial, and socio-economic backgrounds were free to explore together problems of human behavior, offers unusual opportunities toward encouraging greater understanding of other people and more liberal social attitudes.

The literature on this topic presents contradictory evidence. Several studies tend to confirm the general observation that the quality of an individual attitude is not merely a function of the amount of information that he might possess on a given topic (10, 51, 36). Sherif (56) maintains that no significant correlations have been obtained between freedom from prejudice and the degree of contact with the members of the group against which prejudice is directed, or between information and freedom from prejudice. On the other hand, Smith (57) has shown that actual experience with members of a discriminated group can be quite effective in changing attitudes in the direction of greater understanding and greater appreciation of the members as individuals. Marcuse (28) has found that more liberal attitudes are accompanied by greater information on the object of the attitude.

The control group used to study this problem was the smallest in size of the three directive sections, and, therefore, most comparable in this respect to the nondirective class. The control group was selected at time of registration and was assigned to the same room as the

FIGURE 1

SOCIAL DISTANCE SCALE

According to my first feeling reactions, I would willingly admit members of each group (as a class, and not the best I have known, nor the worst members) to one or more of the following classifications:

- (1) to close kinship by marriage
- (2) to my club as personal chums
- (3) to my street as neighbors
- (4) to employment in my occupation
- (5) to citizenship in my country
- (6) as visitors only to my country
- (7) would exclude from my country

PLACE APPROPRIATE NUMBER (S) AFTER EACH:

Canadians	_____	Portuguese	_____
Chinese	_____	Filipinos	_____
English	_____	Russians	_____
French	_____	Scotch	_____
Germans	_____	South Americans	_____
Hindus	_____	Spanish	_____
Indians (Amer.)	_____	Turks	_____
Irish	_____	Roman Catholics	_____
Italians	_____	Fundamentalists	_____
Japanese	_____	Liberal (Modernist) Protestants	_____
Jews-German	_____	Agnostics	_____
Jews-Russian	_____	Atheists	_____
Mexicans	_____	Trade Union Members	_____
Mulattoes	_____	Socialists	_____
Negroes	_____	Communists	_____
Norwegians	_____		

Name (Code Number) \_\_\_\_\_

Date \_\_\_\_\_ Section \_\_\_\_\_

experimental class. There were 23 members in the nondirective group and 31 in the directive.

*Measurements used.* Both groups were asked to fill out a revision of the Bogardus Social Distance Scale (7) one week after the semester began, and then again shortly before the close of the term. Several investigators have found that with the use of the Bogardus instrument or variations based on it, the degree of prejudice of one social group against another is measured quite satisfactorily (8, 18, 36, 56).

It was important in the administration of the test to the classes that anonymity be assured. It was carefully explained that names or other identifying information were not wanted. The

students were asked, though, to choose some code number which they would use for the test at the beginning and end of the term so that their papers might be compared. The instructor left the room while the students decided upon their code numbers. They were told to consider this a serious task and to be completely honest in their answers.

The instrument (see Figure 1) required the subject to give his first feeling reactions toward members of twenty-three nationality groups, five religious groups, and three socio-economic groups. The students were instructed to consider the members as a class, "and not the best I have known, nor the worst members." They were asked to choose that degree of social distance that best



characterized their attitude toward the group being considered. Murphy (35) notes that "if not for all individuals, then for large samples, at least, it remains true that if a given group is not accepted in a given role, it will be refused in all 'nearer' roles."

At the time that the experiment was conducted, there was a good deal of publicity being given to the Communist issue. The House Un-American Activities Committee was involved in a public appraisal of the loyalty of Americans believed to be Communists or Communist sympathizers. Because of a widespread feeling that intolerance of Communism did not have much positive relationship with general intolerance, it was decided to omit the item dealing with attitudes toward Communists in the scoring of the social distance scale.

Mean average social distance quotients were obtained for each student for each test. Then the averages of the respective groups were obtained. They were based on the S.D. quotients of all 23 members of the experimental class and of 27 of the 31 members of the control group. Four members of the latter class were unable to complete one of the two tests due to unavoidable absences.

### 3. Emotional Adjustment

*Methodological considerations.* The literature dealing with the evaluation of group therapy provides abundant evidence for the validity of a hypothesis to the effect that nondirective group therapy has great potentialities in helping individuals toward greater emotional adjustment (39, 3). Rogers (48) has urged that more research be directed to the area of group psychotherapy. Questions in this area have been raised by many as to the limitations of nondirec-

tive group psychotherapy. Scheidlinger (49), representing the psychoanalytical point of view, holds that this type of group therapy is superficial "and cannot deal directly with deeply repressed unconscious conflicts." Luchins (27) doubts whether the nondirective approach can in general be utilized effectively for a collection of individuals "unless at least some of its members are capable of planning and leadership to minimize interference and friction and to produce co-operative achievement." Gross (17) questions whether all students are amenable to this type of therapy and whether its effects will carry over to other phases of life. In the attempt to answer questions of this nature, the following steps were undertaken.

An objective standardized measurement of emotional adjustment was sought that might be meaningful in relation to the hypothesis of this experiment. With the understanding that psychometric evaluations can never quite answer all questions dealing with changes in emotional adjustment, recourse was made in this part of the study to several subjective factors.

*Measurements used.* Despite some of the more critical findings on the refinement of the Minnesota Multiphasic Personality Inventory as a diagnostic instrument, it was felt that at the time of the study, this test represented one of the most meaningful paper and pencil personality measurements available (20, 30, 32, 64). Previous studies on its use in measuring changes as a result of group psychotherapy are available (44).

### D. SUPPLEMENTARY EVALUATION TECHNIQUES

*Course Evaluation Form.* Before the administration of the final examination,

FIGURE 2  
COURSE EVALUATION

Please indicate your answers by putting a check next to the most appropriate statement. Your cooperation will aid us in evaluating the experiment on teaching methods. Please be honest.

Do not write your name or any other identifying information on this paper.

- (1) In helping to know myself better I believe that Psychology 22 was
  - ☐ a) about the best course that I have ever taken
  - ☐ b) better than most courses
  - ☐ c) not better nor worse than most other courses
  - ☐ d) not as good as most other courses
  - ☐ e) one of the least valuable courses
- (2) In helping to know myself better, Psychology 22, compared with Psychology 21,
  - ☐ a) helped me more
  - ☐ b) helped me no more nor less
  - ☐ c) helped me less
- (3) In helping me to learn the subject matter of a course, I believe that the method of instruction used in Psychology 22 was
  - ☐ a) the best I have ever experienced
  - ☐ b) better than the method in most courses
  - ☐ c) not better nor worse than most courses
  - ☐ d) not as good as that used in most courses
  - ☐ e) one of the worst methods for this purpose
- (4) My over-all evaluation of Psychology 22 is that it was
  - ☐ a) about the best course that I have ever taken
  - ☐ b) better than most courses
  - ☐ c) not better nor worse than most other courses
  - ☐ d) not as good as most other courses
  - ☐ e) one of the least valuable courses

PUT A CHECK NEXT TO THE SECTION YOU ARE IN:

- ☐ Section 429 (M W F 12-1)
- ☐ Section 430 (M W F 3-4)

Course Evaluation Forms (see Figure 2) were distributed to students in experimental and control groups. They were asked to give their honest responses to four multiple-choice questions. The questions were designed to elicit the most meaningful expressions of opinion. Anonymity was assured.

*Personal conference data.* Personal conferences were arranged with every student involved in the experiment. In several cases, the writer had two or more personal interviews with students which supplied revealing information as to the adjustment of the subjects and their feelings about the course.

*Reaction reports.* The weekly papers provided a wealth of information as to

the values of the nondirective experience for individual students. No attempt was made to do as intensive an analysis of all reports as Landsman (24) has done. For the purpose of this study reference is made only to those reaction reports in which students expressed their feelings about nondirective teaching. Only in one case, at the end of the semester, were they specifically asked to turn in an over-all evaluation report. In the course of the next two chapters, reference will be made to the most dramatic and sincere papers. They will be cited in conjunction with the more objective statistical results on the major tests used in this study. Thus it may be possible to depict in more meaningful terms the dynamic



effect of this student-centered learning situation than a mere recital of statistical findings could offer.

Two different types of measurements were thus used in evaluating the experiment. The supplementary evaluation techniques just discussed represent an attempt to study the more personal meanings of the experience for the individual students. They may be considered

the more qualitative data. The quantitative data is obtained from the use of standardized objective tests. These attempt to measure adjustment to factors that had previously been set up as criteria of successful learning therapy. Both types of measurements would seem to have obvious advantages and limitations.

## CHAPTER II

### THE RESULTS OF THE EXPERIMENT

THIS CHAPTER will be divided into four major sections. The first three sections will present the results of the tests used to measure changes in the areas of knowledge of subject matter, social attitudes, and emotional adjustment. The fourth section will outline the results of the study involving the use of the Course Evaluation Form. Quantitative results will be presented along with the more qualitative data described in the last chapter.

#### A. KNOWLEDGE OF SUBJECT MATTER

##### 1. Quantitative Results

*Scoring.* Raw scores on the final examination<sup>1</sup> for the course were obtained for all members of the experimental group and control group No. 1 (see section on Control Group, Chapter I). Separate scores for the objective part and conceptual part of the test were obtained.

*Results.* As noted earlier, two equivalent groups were obtained for purposes of this study. Forty-six subjects were used, the 23 members of the experimental group being matched with 23 subjects of the Control Group.

The comparison between the two groups yielded the data shown in Table 1. The difference between the means of the experimental and control groups on the objective test showed a very highly

significant value at the one-tenth per cent level.

The essay part of the test was scored separately under conditions designed to avoid any halo effect. The names of the subjects of the papers were hidden from the writer during the marking of the exam. The differences between the means of the experimental and control groups for this part of the test show a value significant at the five per cent level. (See Table 2.)

TABLE 1  
SUMMARY OF RESULTS OF OBJECTIVE  
PART OF FINAL EXAMINATION

	Experi- mental Group	Control Group
Number of Subjects	23	23
Mean	114.8	135.3
Standard Deviation	18.4	22.6
S.D. of the Mean	3.9	4.8

The standard error of the difference between the mean of the experimental group and the mean of the control group is 6.2.

The critical ratio testing the significance of the difference between the two means is 7.6 (less than .1 per cent). (See Formula No. 11 in Lindquist, 26, p. 57.)

TABLE 2  
SUMMARY OF RESULTS OF ESSAY PART  
OF FINAL EXAMINATION

	Experi- mental Group	Control Group
Number of Subjects	23	23
Mean	23.7	29.2
Standard Deviation	8.7	9.5
S.D. of the Mean	1.8	2.0

The standard error of the difference between the mean of the experimental group and the mean of the control group is 2.7.

The critical ratio testing the significance of the difference between the two means is 1.98 (less than 5 per cent).

<sup>1</sup>The objective examination consisted of 123 items, 3 of which were not scored. Of the 120 scored items, 60 were true-false questions counting one point each and 60 were multiple-choice questions counting two points each. The total possible score was 180 correct. The conceptual or "subjective" examination required the student to define four of six basic psychological concepts. Total possible score on this part of the test was 40.

Thus, in both the objective and conceptual examinations, the control group appeared to do significantly better than the nondirective experimental group.

## 2. Qualitative Results

"What sacrifices must be made, if any, to other educational objectives when priority is given to the objective of self-insight?" Gross (17) asks this challenging question in an article stressing the therapeutic values of student-centered teaching. It appears from the results of this study, that under a classroom learning-therapy situation structured in the manner previously outlined, students do not learn as many facts derived from study of a textbook as they do under directive teaching.

When the nature of the experiment was outlined to the experimental class and the announcement of the final examination made, most of the students seemed to express the reaction that they would not do as well on an objective text-centered examination. Their predictions were borne out. However, many of them felt that this type of examination would not be a fair measure of their "knowledge of subject matter." Their final reaction reports, in which they were asked to express their honest over-all evaluations of the course, included several references to this. One man said:

My reaction to the proposal given in class that we take the same test given to other psychology classes was of a dubious nature. I say this because I don't believe it would prove the validity of the nondirective course in that the other students prepared specifically for the test whereas the nondirective students may or may not have prepared for the test by learning exact facts in the chapters. It is my understanding that the nondirective course is designed to give a more general outlook on the subject of psychology and to place little emphasis on small details.

On the basis of the results from other measures used in the experiment, it is possible to conjecture that the experimental group might have attained higher achievement on a more qualitative and subjective final examination. One student commented on the peculiar values this class had for him in the area of knowledge of subject matter:

Now that I have completed the course, I can look back and evaluate its worth. The most logical way of determining the course's worth is through comparison. Last year I was in directive Psychology 1; by contrasting my attainment in Psychology 2 against Psychology 1, I can hopefully arrive at a definite answer. I feel that Psychology 2 was far more beneficial from the standpoint of practical knowledge. I will readily admit that I am somewhat lacking in certain technical aspects as compared with last term; nevertheless, I believe that I have acquired and will retain ideas, concepts, and practical material that would have been impossible for me to obtain in a directive course. . . .

As a result of this course I find myself earnestly in favor of setting up a system by which there will be a compulsory one or two years for the majority of college students to spend in a foreign country. In this way, a student can achieve, perhaps unconsciously, a knowledge, and say—"brotherly love"—of his far-off neighbors. I doubt very much if I would have attained such an opinion from a directive course.

Another man in an early reaction report described how the student-centered techniques of the nondirective class operated in encouraging people to see that there are two sides to most stories:

A value of the nondirective class was proven to me the other night over a couple of beers. Involved in the discussion were a group of General Psychology students. I was the only one in a nondirective class.

What we were talking about was immaterial, but the basis for the theories of the other students was very material. The professor said so, is what they were claiming. This I didn't object to, perhaps the professor was right. But it occurred to me that these students were getting one concept, the concept that the leader of the class believed in.

What happens in our class? We have twenty-odd students, twenty-odd brains who do not all believe in the same concept. Since we are allowed

to discuss freely our views, our twenty-odd students are exposed to a number of different ideas. . . . I believe that to learn completely is to be exposed completely. Only in a nondirective class are different opinions, different viewpoints so freely expressed.

An observation that the writer had made of the experimental class under study as well as of other classes taught in this manner is that students tend to do more reading on a greater variety of subjects than in traditional classroom situations. The following reaction report excerpt is particularly interesting in this respect:

At various points in the past semester's course in nondirective psychology, I have wondered, "Just what is this supposed to do?" I admit that I still don't know the answer, but I have some observations as to what I think it has done.

First, I doubt if students taking a nondirective course could equal the credit average of other students who had pursued a directive type study of any subject in an examination which was intended for students who studied the textbook primarily. Students in a nondirective course will not study the basic "assigned" text as much, I feel. However, I feel that there was, if less reading in the text, much more outside reading done in this nondirective course. This is because the "axe" was lifted from students' heads for awhile, and they could extract from the course exactly what they wanted. This seems a tremendous advantage over the old "drill it into them" attitude. We remember very little taught to us in that way, for long. So, I feel that the breadth of knowledge received may well be worth what sacrifice is made to intensity and specialization.

Also to be considered is the advantage of direct participation over inactive learning. When constantly stimulated by the remarks of the other students in the group, there is greater effort on the individual's part. I found this true in my case and in the other students that I questioned.

Some of the students in their class discussions and in their reports urged more "direction." One man felt that the class was fairly successful at Mohawk College because the students were older than the average sophomore. He felt the nondirective techniques should be limited to those who are more advanced.

After a complete semester with the nondirective technique, I am much more pleased with it than I was at first. I still think direction is necessary for first year students in psychology or any other subject. I can see great possibilities for more advanced students. Most of the students in our class are veterans. They are older and more mature, so are better adapted to the nondirective method than the average first or second year college student. They have more experiences to call upon in discussions. But even so, much of their statements are hearsay, and should not be admitted as fact. I noticed a decrease in this matter in the latter part of the semester. Most of these discussions had a common background gathered from a source.

However, I can't recall once when a definite conclusion was reached. A good deal of time was spent going in circles. This seems to prove the need for some slight direction for students in first year courses.

There were a number of others, a majority of the class according to their final papers, who felt that this lack of definitive conclusions based on an authority was not a very serious defect. The following excerpt is from a paper of a student who confessed in another connection that this course started him thinking about the basic questions of life for the first time in his academic career:

It is hard to write my reactions towards the nondirective methods of teaching because I could very easily rationalize. I enjoyed the classroom discussions. I feel I have learned much. I enjoyed the fact that nothing was compulsory, and that I could even take advantage of this non-compulsion. I am sure that I do not know too much of Munn, but is it rationalization when I say that I do not care that I don't know Munn? What I have learned is better. . . .

I do not think I ever enjoyed a class so much in all my years as a student. But there were times when I was annoyed by the discussions and frustrated when I wasn't able to say something I felt was pertinent. I believe I have achieved more from our particular class than the average student. My reservoir of practical knowledge was substantially increased.

Another student summarized what to him were the basic advantages of nondirective education:

This class—for the first time in a year and a half at Mohawk—begins to approach my pre-



college dreams of what college would be like. First of all, I like the fact that our instructor sits "on a level" with the students. I mean that figuratively and literally. By sitting in a seat with the class he not only gives up his position as "leader", but instills the desire to enter discussions in many students who might ordinarily be "listeners". Also, this stimulates more class participation by those students who ordinarily are not afraid to talk. Finally, the students in this class, as a group, have seemed better informed on the subject matter than those found in any other average class. . . .

This term, in class, I tried to reach some positive conclusions from the discussions, and to give both the class and myself some "working knowledge" which might be helpful in understanding ourselves and others in later life.

**Summary.** The results of this phase of the experiment indicate that nondirective teaching, as outlined in this study, is not as effective as the traditional teaching techniques in helping students master the factual subject matter of a course in general psychology as measured by an examination based on knowledge of textbook material. However, personal evaluations of the course by the students suggest that nondirective teaching encourages greater outside reading, stimulates thinking about basic conceptual material, and makes for more independent decisions based on the knowledge of many individuals and not just one "authority."

## B. SOCIAL ATTITUDES

### 1. Quantitative Results

**Statistical results.** In evaluating the changes in feelings of social distance that might have resulted as a consequence of the nondirective experience, the following techniques were employed.

The average Social Distance Quotient was obtained for each student for the test taken at the beginning of the term and for the test taken toward the close of the term. Mean averages for the groups were calculated.

In both experimental and control sections, the mean was lower in the second test, implying an increasing "general tolerance" or improvement in social recognition.

There was no significant difference between experimental group mean and control group mean on the pre-test or on the end-test. The difference between the two groups at the beginning of the experiment is .48. At the end of the experiment, it is .59. The data in Table 3 indicate that the improvement of the experimental group was not reliably greater than that of the control group.

If this experiment were to be repeated, the writer feels that a larger sample would have to be used to assure more definite results.

### 2. Qualitative Results

The most favorable data supporting the hypothesis that nondirective teaching promotes the development of democratic social attitudes comes from evidence largely subjective and observational in nature. The following is the verbatim final evaluation report of one of the members of the experimental group:

Considering the nondirective technique as applied to the class as a whole, I would say that

TABLE 3  
SUMMARY OF RESULTS OF SOCIAL  
DISTANCE SCALE STUDY

	Experimental Group		Control Group	
	Pre-Test	End-Test	Pre-Test	End-Test
Number of Subjects	23	23	31	31
Mean Average	2.26	1.96	2.74	2.55
Standard Deviation	1.07	0.95	1.26	1.22
Standard Error	0.23	0.20	0.25	0.24



it has been a very effective method of instruction. The air of informality that existed throughout the course easily bridged the barrier that exists between teacher and student in most directive courses. Because the students felt the absence of any authoritative direction, they felt free to relax and air their opinions freely without fear of contradiction from the instructor.

Casting an objective eye on my own case, I would say that the course has helped me quite a bit. Summarized briefly, here's the reason why.

In my occasional honest moments, I have been forced to regard myself as a narrow-minded individual. Prejudice and emotion have usually counterbalanced logical reasoning in my mental make-up. I am invariably right and the other fellow is invariably wrong. Why? Because the leaders of some political, economic, or religious faction say so.

In my first year of college, I read a lot of books and heard a lot of talk, but neither books nor talk made much of a dent in this narrow-minded complacency of mine. The second year I enrolled in courses, I got my teeth into political science, economics, and psychology. I was confident that these courses would confirm my own previously solidified opinions. When they didn't, I was suspicious of the validity of my own views, but I was still stubborn. These courses and lectures were slanted and intended to influence and corrupt my own righteous outlook on things. So I reasoned. Before entering the nondirective course I was confused but game. The other fellow was still wrong, and I was still right.

At the start of the class, I heard many different shades of opinion expressed. They were uttered in the same spirit that usually permeates a barracks bull session. The class could be compared to an arena where anyone was welcome to come out and do battle for his own views on things. But I kept silent; largely I must admit, because I was too self-conscious and felt awkward when speaking before the class. But partly because I realized that some of the opinions I felt like expressing weren't worth uttering. I felt then, and I feel now, that they would have been subjected to the ridicule of the class. They represented views based on a faulty foundation of prejudice and emotion. Under the cold spotlight of truth and logic, they would have been exposed for what they were: damned stupid ideas for a human being to harbor.

I realize all this now, as I write this report. I failed to appreciate its plain common sense at the beginning of the course, or indeed the previous one and a half years I have attended Mohawk.

In the light of what I have silently observed in the nondirective class these past months, I

consider this particular course the starting point of my liberal arts education. It has succeeded where a good many textbooks and instructors have failed, for it has given my thoughts a helpful push into liberal channels. In short, it has taught me to think carefully rather than to condemn impulsively. And for this, I am grateful.

More than once a student in the experimental group commented on the personal values of writing the reaction report. An awareness on the part of the student of what Landsman has called "scripto-therapy" was evident in the following report:

One of those nasty feelings has just overtaken me. Just what is required of me in this class? What are these reaction reports for? Having to ask for a mark without knowing what to base it on? Whether or not what I feel is worthy of a good mark is what you consider sufficient is bothering me.

This is just like a nondirective counseling session, only instead of speaking, I'm writing randomly. I seem to be asking questions and answering myself. This might be the basis for the reaction reports.

Another student quite consciously seemed to realize the value of nondirective teaching in the area of changing social attitudes.

There is one aspect of our nondirected class that impresses me very much. It is one of the few places on the campus, where men of all creeds and beliefs can gather together and exchange ideas. As I understand it, this was a customary practice among the ancient Greek intellectuals, and I often wonder why it has never been revived to any wide extent in this modern world of ours. After viewing the nondirected method in action the past eight weeks, I am beginning to realize how sensible the ancients were. The classes' air of friendliness and informality certainly encourages a thoughtful hearing of the other fellow's viewpoints. This tolerant spirit is, to put it mildly, extremely rare.

If we are to live in a world where tolerance and understanding is the rule rather than the exception, the sooner it becomes universal, the better. For this reason I am all in favor of installing nondirected classes not only in colleges and universities, but in high schools as well.

The results of this part of the study suggest that the nondirective learning

experience has definite potentialities for improving social attitudes that a more formal and intellectualized classroom situation fails to offer. Newcomb (38) has stressed a very important point pertinent to the topic of teaching "tolerance." His studies indicate that the process of acquiring and retaining information relevant to a controversial issue is dynamically related to the process by which an attitude toward it is acquired; that concern, usefulness, and opportunity operate as determinants of information; and that the manner in which these determinants operate is influenced by the uniformity, direction, and intensity of the attitudes of other individuals in the community—i.e., the local attitude climate.

In a permissive accepting atmosphere where people of different religious, philosophical, and socio-economic backgrounds are implicitly encouraged to discuss emotionally-involved topics, certain positive changes may take place in the area of social attitudes.

*Summary.* An interpretation of the results of the Social Distance Scale study indicates that both groups improved in attitudes of general tolerance from pre-test to end-test. No statistically significant differences were found between directive and nondirective groups.

Examination of individual reaction reports reveals marked changes in social attitudes which some students attributed to the particular qualities of nondirective teaching. The reaction reports themselves appeared to provide a helpful learning technique in at least a few cases.

### C. EMOTIONAL ADJUSTMENT

#### 1. Quantitative Results

*Preliminary considerations.* The examination of the literature on the

validity of the Minnesota Multiphasic Personality Inventory poses a challenge as to the most meaningful utilization of data obtained with this instrument. There have been many serious critical charges leveled against the diagnostic value of the MMPI (22, 50, 32). Hunt, Carp, et al. (22) claim that blind profile analysis is unsatisfactory. They suggest, however, that the use of the MMPI in conjunction with other case data might prove useful. Modlin (30) holds that while the test is a valuable psychometric "adjunct" to clinical practice, it does not establish definitive diagnoses. Morris (32) feels that it does not aid in the differential diagnosis of pathological conditions but does discriminate fairly well between borderline normals and serious pathological conditions. Benton and Probst (4) found that the diagnostic value of the instrument is very poor in the areas of hypochondriasis, depression, hysteria, femininity, and psychasthenia trends. On the other hand there was a significant degree of agreement between the psychiatric ratings and the test scores with respect to the psychopathic deviate, paranoia, and schizophrenia trends.

*Scoring methods.* In consideration of the above, the following procedures were undertaken with a view toward obtaining some objective meaningful results which might be correlated with other more subjective data. The MMPI answer sheets were all machine scored. There were two sets of papers for each section involved in this part of the experiment. Profile and case summary cards were prepared for the analysis. The revised form 46-200 cards were used.

Analyses and interpretations<sup>2</sup> were

<sup>2</sup> Acknowledgement is made of the significant assistance rendered by Dr. William Sheldon of the Psychological Services Center at Syracuse University in the interpretation of the MMPI profiles.

made of the profiles of all the members of experimental and control groups who had completed and turned in both pre-test and end-test. Twenty-two of the 23 members of the experimental group fulfilled this requirement. However, 9 of the 31 members of the control group No. 2 failed to complete and turn in one of the two tests. The writer admits at this point a deviation from rigid experimental design and acknowledges that the results may suffer in accuracy as a result of this omission.

A comparison of the profiles of the two groups on the pre-test indicated that there was an adequate degree of initial equality to warrant further intensive analysis of individual changes taking place from the beginning of the semester to the end-test. Four categories were set up to characterize the type of change that may have occurred as a result of the learning-therapy situation as measured by the MMPI. These categories were (a) better adjusted; (b) poorer adjusted; (c) no change; (d) questionable validity. The subjects were classified into one of these categories on the basis of a comparison of profiles of pre-test and end-test. The scores on the profiles were not compared directly on a numerical basis; rather, they were held to be either significantly deviant from the norm or within normal limits. Significant deviations refer to standard scores of 70 or over.

Discretion had to be used in interpreting several of the scales. For example, clinical experience has shown that significant deviations on the masculinity-femininity scale is not necessarily evidence of perverted sexuality but is indicative of masculine or feminine interest patterns (55, 20). Thus this scale was not used independently in measuring emotional adjustment. Diagnosis was

made on the basis of a study of the whole profile picture and with an awareness of the suggestions offered by Hathaway and McKinley (20) and other experimenters with the test.

*Results.* Table 4 represents the final classifications based upon "blind" analyses of the MMPI profiles.

Thus this phase of the experiment tends to confirm the results of several studies on the effect of nondirective group therapy. Seventy-three per cent of the students in the experimental class appeared to be better adjusted at the end of the term. Only one person revealed a poorer profile and 3 students or 14 per

TABLE 4

ANALYSIS OF CHANGES IN THE AREA OF EMOTIONAL ADJUSTMENT BASED ON COMPARISON OF MMPI PROFILES FOR PRE-TESTS AND END-TEST

	Experimental Group		Control Group	
	No.	Per Cent	No.	Per Cent
Better Adjusted	16	73	5	23
No Change	3	14	14	64
Poorer Adjusted	1	4	2	9
Questionable Validity	2	9	1	4
	22	100	22	100

cent of the nondirective section demonstrated no significant change. As a partial control on other factors that might have been responsible for these results, the statistics on the control section are revealing. Here the largest group, 14 students, or 64 per cent, showed no significant changes from beginning to end of term according to their MMPI profiles. Twenty-three per cent appeared to be better adjusted and 9 per cent had poorer profiles. Questionable validity was recorded when the subject's F-score showed a significant deviation from the mean.

The most meaningful statistical treat-



ment of these results attempts to measure whether there is any significant difference between the number of subjects in the experimental group vs. the control group who were rated as better adjusted at the end of the semester. The problem, stated in another way, reads: Is the difference between the 23 per cent and 73 per cent of the two 100-per-cent item samples significant? The answer, obtained by standard statistical techniques (Croxtan and Cowden, *Practical business statistics*. New York: Prentice-Hall, 1948, p. 373), is that the difference is clearly significant:  $t = 4.5$ . There is less than one chance in 1000 that a difference as great as this could occur as a result of random errors of sampling.

In analyzing the individual profiles, an incidental observation was made that is of interest. More of the improved profiles showed adjustment in the psychotic areas than in the neurotic areas. This finding may be understood by referring to the study of Benton and Probst (4) on the validity of the inventory scales.

It is interesting to compare the results obtained here with the ones reported by Gross (17) in his study of the class taught by Nathaniel Cantor at Buffalo. Cantor, who has pioneered in the field of student-centered teaching (9), is an advocate of nondirective group instruction and therapy as a method for developing social sensitivity and self-insight in his students. Gross administered a partially standardized scale for measuring self-insight (a) to one group of students registered for Cantor's course "The Dynamics of Learning" and (b) to another group registered for Principles of Economics taught in the traditional manner. Although Gross says that his study does not have statistical significance, he feels that observation lends weight to the interpretation that Cantor's method encourages the development of self-insight of a majority of the students.

## 2. Qualitative Results

Again some of the more subjective material that is provided by the design of

this study is to be found in reaction reports and conference material. An excerpt from one of the more revealing papers follows:

In the first reaction report I wrote, I explained many of my thoughts and feelings on and about nondirective classes. The only thing that has changed is that my positive reactions to the technique have become stronger and the negative sections of my reactions have vanished.

I also feel that I have gained more real knowledge in our class than I have ever gained in any other class.

At the beginning of the term I explained that for the first time I faced a classroom situation in which I was not confronted with the birch-rod (physical or mental) wielded drill sergeant called a teacher. I was no longer confronted with a situation in which I was forced to abide by the decisions of the ultimate authority. Like everyone else I began to regard teachers not as friends but as enemies who tried to make the student believe that "this hurts me more than it hurts you" in regard to marks and disciplining.

I always wanted to try something new and something attractive in classroom, but I never got a chance to. I would liken the average school to people walking between two very close walls of teachers, syllabi, and regulations. One is never able to take a peek over the walls; instead, he must walk the beaten path to graduation.

In the nondirective class I was able to run all over the field finding out for myself what I wanted to know. The classroom was no longer oppressive for the class was my own. I worked with my equals doing what I wanted and really learning. My ego was lifted quite a bit each time we met for, with the exception of my contacts outside of school or work, always some older person was there to look down contemptuously upon anything I tried to do. "Take it easy, you're still young".

While I was learning I also helped myself to adjust to the environment. Along with your help I was able to clear up one of my biggest problems in our discussions in class.

Why the hell didn't someone think of this before?

Some of the students intellectualized their reactions. The following was written by the student who obtained the highest score on the final examination given to the experimental class.

Primarily I think that our class is based on excellent motivation devices. Reward comes, not

from exterior sources, but from within. Whereas dependence on a vast array of material rewards is fostered throughout early school life, this class, I feel, has done much to overcome the results of this unhappy formula. As discipline is shifted from without to within, there is an accompanying feeling of growing maturity. Rivalry is reduced to a minimum, but continuous self-expression (if the use of it as motivation can be called rivalry) and its effect on prestige is introduced as a subsidiary aid in learning. In a normal class with a presiding instructor, it is next to impossible to create a dynamic background for the learning process. Our class, since it is a cooperative affair, not only allows, but necessitates intentional learning. The class is a continuous recitation, often accompanied by excitement and strong interest which I need to counteract apathy. Even though self-motivation may be carried over to regular class sessions, it does not have the chance to remain vigorous unless aided by intra-class discussion.

Therapeutic value for me has been in the relief from constant deadlines. I work better when there is not the usual pressure from forthcoming tests and exams. I like, too, the way in which cooperative action has shown itself to be practical. If a group can work together, perhaps the whole world can do so.

*Summary.* The results of this study seem to confirm those of other investigators of group nondirective psychotherapy. Profiles on pre-tests and end-tests of the Minnesota Multiphasic Personality Inventory were compared for subjects in the experimental group and control group No. 2. Blind analyses and interpretations were made and each student was classified as having become better adjusted, poorer adjusted or not having changed in the area of emotional adjustment after being subjected to the different classroom situations. The statistical results indicate that the nondirective group improved to a significantly greater degree than the control group. Other evidence available on members of the experimental group suggest that the therapeutic aspects of their learning situation was a factor in a number of cases for these changes.

#### D. COURSE EVALUATION FORM

*Preliminary considerations.* It is essential that the results obtained on the Course Evaluation Form be examined with an awareness of all the possibilities of error and bias that might invalidate their significance. Forer (13) in a thoughtful article stresses the need for this type of caution being exercised.

Testing the correctness of inferences about a client by requesting his evaluation of them may be called a "personal validation". When the inferences are universally valid, as they often are, the confirmation is useless. The positive results obtained by personal validation can easily lull a test analyst or a therapist into a false sense of security which bolsters his conviction in the essential rightness of philosophy of personality or his diagnostic prowess. Such false validation increases his comfort in using what may have been a dubious instrument.

An effort was made to obtain an evaluation instrument that would give meaningful results. (See Figure 2, p. 7.) As noted earlier precautions were taken to assure anonymity and honesty of opinion.

*Results.* The first step in analyzing the data involved the assigning of an arbitrary value (positive, negative, or zero) to each evaluation. Table 5 presents the statistical findings.

The standard statistical techniques used indicate that in three of the four questions, the mean was higher for the experimental group. In questions 1, 3, and 4, the difference between means was highly significant at or below the one per cent level. In question 2, which has three possible choice responses instead of five, the difference between the means though favoring the experimental group was not statistically significant.

In view of the results of the final examination, the self-evaluation of the students evidenced in the third question



TABLE 5  
RESULTS AND ANALYSIS OF RESPONSES  
TO THE COURSE EVALUATION FORM

	Experi- mental Group	Control Group	
<i>Question 1</i>			
Number of Cases	23	31	
Mean	1.39	0.65	
S.D. of Mean	0.13	0.16	
"t"			3.59
Probability			0.1%
<i>Question 2</i>			
Number of Cases	23	31	
Mean	0.77	0.77	
S.D. of Mean	0.06	0.10	
"t"			1.20
Probability			25%
<i>Question 3</i>			
Number of Cases	23	31	
Mean	0.74	0.00	
S.D. of Mean	0.21	0.18	
"t"			2.68
Probability			1%
<i>Question 4</i>			
Number of Cases	23	31	
Mean	1.13	0.45	
S.D. of Mean	0.18	0.18	
"t"			2.67
Probability			1%

of the Evaluation Form is interesting:

In helping me to learn the subject matter of a course, I believe that the method of instruction used in Psychology 22 was (a) the best I have ever experienced, (b) better than most courses, (c) not better not worse than most courses, (d) not as good as that used in most courses.

Though they did significantly poorer on a factual final examination, the students in the nondirective class felt that their class situation helped them to learn general psychology more effectively than did the students in the traditionally-structured class. This suggests that a different concept of "subject matter" was involved in the final examination than was experienced by the subjects.

*Summary.* According to responses to an anonymous Course Evaluation Form, the experimental group felt that their class was more helpful in teaching the subject matter than did the members of the control group. In three of the four questions of the Form, the results are statistically significant in favor of nondirective teaching.

### CHAPTER III

## SUMMARY AND CONCLUSIONS

### A. SUMMARY

THE aim of this study was to evaluate the over-all effectiveness of non-directive teaching of an undergraduate course in general psychology as compared to the traditional lecture-discussion method. A controlled experiment was designed to investigate the value of the nondirective method in effecting changes in students' intellectual, social, and emotional adjustment.

The subjects included 124 students enrolled in the second semester of a year course in general psychology. They were divided into one experimental and three control groups. All four sections were taught by the writer. In the non-directive experimental class students were free to choose their own goals. The students were required to select most of their own reading materials and to write weekly reaction reports based on their feelings about any experience. The students were expected to provide the discussion and to grade themselves at the end of the term. The major role of the instructor was that of a group nondirective counselor who helps to create the atmosphere for self-directive learning. The control sections were conducted in the traditional manner the writer believes to be typical for most college social science courses. Unlike the experimental group, they were given several subject-matter quizzes during the course of the term.

Students of the experimental group were matched with members of the control groups on the basis of scholastic aptitude and achievement. A final objective examination dealing with the factual material of the textbook was ad-

ministered to the equivalent groups. The experimental students had received their final grades prior to taking the examination. The Bogardus Social Distance Scale was given to experimental and control groups at the beginning and at the end of the semester. Pre- and post-testing with the Minnesota Multiphasic Personality Inventory was designed to measure changes in the area of emotional adjustment. Supplementary evaluation techniques included a Course Evaluation Form which was filled out by both groups at the end of the semester, personal conference data, and the weekly reaction reports written by members of the experimental class.

The control group did significantly better on both parts of the objective final examination. However, the supplementary evaluation data indicate that the nondirective students gained a greater knowledge of diversified subject matter and did more independent reading and thinking about psychology than did the control subjects.

An analysis of the results of the Social Distance Scale study indicates that both groups improved in attitudes of general tolerance from pre-test to end-test. No significant differences between the groups were obtained.

Blind analyses and interpretations were made of the profiles on subjects for the MMPI tests. The statistical results show that the nondirective group improved to a significantly greater degree than the control group in the area of emotional adjustment.

The results of the phase of the study involving students' responses to an anony-

mous Course Evaluation Form indicate that the experimental subjects believed their class situation to be more helpful to them in learning the subject matter of the course than did the members of the control group. The supplementary evaluation data also suggest that the nondirective group made the more favorable changes in the area of social and emotional adjustment. Several members of the nondirective class expressed the feeling that the particular approach of their class was a factor in these changes.

#### B. INTERPRETATION

One of the purposes of the present study was to determine whether a situation designed to provide the maximum freedom of individual operation for the student encourages desirable changes in his total personality.

In considering the results on the final examination, stress must be placed upon the fact that this was a traditional factual examination ordinarily designed for syllabus-centered classes. Also it is important to realize that in one class the examination was taken as a basis for a course grade while in the other it was not. In this respect the instrument could not be expected to give strictly comparable results as to gains in factual information. A much more meaningful result would have been obtained if the same examination could have been given to each group without warning a month after the end of the course.

In any event, there appear to be two frames of reference that have to be considered in evaluating final examination results. One frame of reference is that of the external descriptive situation. The other is that involving the individual's self-concept, his own needs and satis-

factions. The statistical results of this study measure only the first situation. There is an implicit challenge to educators here as to which is the more important frame of reference—the one designed by the teacher or the one within the student.

The implications of this study for other undergraduate courses should be considered. Some investigators have felt that nondirective teaching might be profitably employed in the teaching of mathematics, the physical sciences, and other core subjects. Under our present educational system, it is unlikely that many instructors would feel that the method described in this study would be an efficient one for a course where knowledge of specific factual subject matter is an all-important objective. However, inasmuch as nondirective teaching seems to encourage other academic values such as independent judgment, intellectual curiosity, and strong positive motivation, experimentation might well be directed at a revision of the method which would aim at both objectives.

As for the nondirective teaching of undergraduate courses in general psychology, the writer tends to agree with Pressey (43) that self-understanding and adjustment are the major objectives of a course of this nature. Nondirective teaching, as the results of the other phases of the study indicate, offers greater possibilities than traditional teaching methods in reaching these goals. The future may witness a growing trend in the thinking of educators to the effect that the major objective of *all* undergraduate education is not information-giving but rather the development of a total personality.

This total personality includes feel-

ings and emotions as well as intellectual knowledge. It includes feelings about other people and about oneself. Recent objective studies offer evidence that there is a significant positive relationship between the attitudes that a person holds toward himself and the attitudes he holds toward others (54, 61). The present investigation implies that the nondirective teaching-therapy situation effects concomitant improvement in the attitudes that students hold toward themselves, and the attitudes they hold toward other people. These changes in feeling as measured through the instruments used here appear to be significant within the limits of this study. It is hoped that further research involving larger populations may be directed toward re-examining these problems.

It is very interesting to note that whereas the experimental group did poorer on the final examination than the control group, the members of the former group responded to the Course Evaluation Form to the effect that their class helped them to learn the subject matter of a course better than most other courses they had had. Is it important that the students felt that they learned if the objective test findings indicate they did not? Perhaps the basic question once again deals with the concept of the material learned. On the basis of the over-all results, the writer hazards the interpretation that the nondirective men gained a better understanding of the unity of man's behavior and that the control group learned more unrelated details. It should be stressed of course that this interpretation is based largely upon subjective evidence. The limitations that are involved when a study of this nature is designed, undertaken, and judged by the same investi-

gator must also be considered in evaluating all of these results.

### C. IMPLICATIONS FOR FURTHER RESEARCH

There is a need for more intensive research to test the validity of the interpretations found in this and previous studies. A method that would be very helpful to use in this connection is that of the follow-up. Pressey (42) has described how student-centered classes tend to retain material for longer periods of time than lecture-type classes. The results of examinations given to nondirective subjects six months after completion of their course compared with those of a control group would prove most interesting. The length of time that changes in social attitudes and emotional adjustment would be retained as a result of group therapy of this type is still an unanswered question.

One problem that presented itself during the course of this investigation dealt with the type of student that benefited most from nondirective teaching. It was obvious that some students were helped more by the method than others. Why? No attempt has been made thus far to examine the reasons for this. It would prove helpful to know whether screening of students for certain intellectual and social characteristics would be a worthwhile task for the nondirective teacher.

Another very practical problem that warrants further study refers to the evaluation process. Current educational policy in the majority of the institutions of higher learning requires that letter grades be assigned to students at the completion of every course. These grades are often given a good deal of consideration by graduate schools, personnel executives, and professional associations as



measures of achievement. Where no criteria are presented for purposes of self-evaluation, students become confused and insecure about the grading process. If vague criteria are set up, marked inconsistencies develop. Students grade themselves from individual frames of reference.

From a phenomenological point of view, self-evaluation is something that should be encouraged. Rogers has urged that the focus of evaluation should be in the student in order that he develop a sense of responsible maturity:

Suppose we are dealing with the degree of progress a student has made in a course. If I give him a grade, the locus of evaluation is in me. If I provide an atmosphere in which the student can come to make a clear and nondefensive self-evaluation, the locus of evaluation is in the student (46).

A complete acceptance of this approach puts the instructor in conflict with prevailing educational practices. These practices place knowledge of subject matter on the highest level as a criterion for grading. In the nondirective class of the present investigation, the writer believes that the majority of the students were honest in feeling that they had earned the final grade they requested. However, he is aware that several students whose knowledge of the traditional subject matter of psychology was very limited received grades of "A" and "B." In these cases, was an injustice being done to those students' future employers and graduate schools to whom, rightly or wrongly, letter grades signify degree of mastery of traditional subject matter?

In view of the results of the study and these latter considerations, the writer has been experimenting with a revision of evaluation procedure in nondirective teaching. Every member of the class is assured of a passing grade if the basic

limitations of the course are met. Whether the student obtains "C," "B," or "A" depends upon his achievement on an objective examination which will be based on the material in the required textbooks of the course. This procedure may give the student a more objective criterion for grading and at the same time meet the prevailing requirements in regard to knowledge of factual subject matter. It is made quite clear to the students that the letter grade does not represent a measure of achievement in the realization of any personal values other than knowledge of specific factual information. The all-important self-evaluations will have to be made by the student perhaps many months after the completion of his course.

It seems fitting to close this study on nondirective or student-centered teaching by referring to the final reaction report of a member of the experimental group. This student was openly opposed to nondirective teaching at the beginning of the term.

The nondirective method, in my opinion, has proved to be highly successful. The experiment has enabled me to gain a new perspective toward education. My earlier skepticism toward the innovation was, I think, justified, when viewed in the light of thirteen years of the former mode of teaching. I never regarded the lecture-note taking scheme very highly, but since it was the accepted method, there was hardly any alternative. In my early years in school I did revolt against the practice of channeling the students' thought processes along the teacher's sometimes narrow lines. However, in the school I attended there was no provision for a nonconformist, so I gradually became a member of the herd. Therefore I was unable to completely accept the nondirective method in entirety until about the middle of the semester.

After he visited our class Doctor Snygg said that the only fault he could discern was vagueness in the discussion. However, it seems that out of necessity there must be a certain amount of inadequacy on the part of the students when the discussions range anywhere from the Kinsey Report to the psychical causation theories.



Whether vagueness is an evil of the nondirective method at this point, no longer seems important to me. The most important aspect, in my estimation, is that by active student participation, fields are opened to the students by classmates that the most versed teacher would be

incapable of teaching. The discussions have invariably been interesting, fruitful, and very enjoyable. It is my opinion that the most important aspect of the experiment is that it has proved that nondirective (teaching) works, and I believe it has won twenty-three adherents.

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